



DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, DC 20380-0001

MCO 1543.10

C2I

22 Dec 92

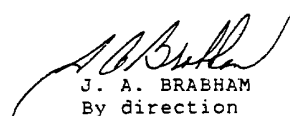
MARINE CORPS ORDER 1543.10 W/CH 1

From: Commandant of the Marine Corps
To: Distribution List

Subj: MATERIEL FIELDING PLAN FOR THE BREATHING APPARATUS,
UNDERWATER (UBA)

Encl: (1) Materiel Fielding Plan for the Breathing Apparatus,
Underwater (UBA)

1. Purpose. Enclosure (1) is provided as information and instructions concerning the fielding of the Breathing Apparatus, Underwater (UBA).
2. Information. National Draegar is the manufacturer of the LAR V. The LAR V has been assigned a National Stock Number (NSN) and is currently being used by the U.S. Army and U.S. Navy. The Marine Corps has also selected the LAR V and has given it the name Underwater Breathing Apparatus (UBA). The UBA is the central item of equipment necessary to perform closed circuit diving. The UBA enhances the reconnaissance underwater diver's ability to remain under the water for longer times and without detection by the presence of bubbles on the surface.
3. Action. The commanders of each organizational element concerned shall ensure implementation of the provisions of this Order.
4. Reserve Applicability. This Order is applicable to the Marine Corps Reserve.


J. A. BRABHAM
By direction

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MCO 1543.10 Ch 1
CBGR
7 Nov 94

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From: Commandant of the Marine Corps
To: Distribution List

Subj: MATERIEL FIELDING PLAN FOR THE BREATHING APPARATUS,
UNDERWATER (UBA)

Encl: (1) New page insert to MCO 1543.10

1. Purpose. To transmit a new page insert and direct a pen change to the basic Order.

2. Action

a. Remove appendix A to enclosure (1) and replace with the corresponding page contained in the enclosure.

b. Enclosure (1), page 3, paragraph 3b(1), change to read, "Regulator must be rebuilt by Coastal Systems Station (Code 2530) every 6 years."

3. Filing Instructions. File this Change transmittal immediately behind the signature page of the basic Order.


L. P. KREITZER
By direction

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MATERIEL FIELDING PLAN

FOR THE

BREATHING APPARATUS, UNDERWATER (UBA)

1. Introduction

a. Source of Requirement. Commanding General, Marine Corps Combat Development Command (CG MCCDC) message 252000Z Jul 90 identified a Draegar LAR V as an equipment requirement for the Special Operational Capable (SOC) units.

b. Points of Contact

<u>Name</u>	<u>Command/Telephone</u>
GySgt Scriven	Project Officer Diving Equipment MARCORSYSCOM (C2IA) Quantico, VA 22134-5010 AV/DSN 278-2914 COML: (703) 640-2914
Major Thompson	ILS Officer Diving Equipment MARCORSYSCOM (C2IL) Quantico, VA 22134-5010 AV/DSN 278-2234 COML: (703) 640-2234
Bob Greenleaf	Inventory Manager Diving Equipment MARCORLOGBASES (Code 835-1) Albany, GA 31704-5000 DSN 567-6534 COML: (912) 439-6534
Thomas Linden	Equipment Specialist Diving Equipment MARCORLOGBASES (Code 835-1) Albany, GA 31704-5000 DSN 567-6534 COML: (912) 439-6534

c. Fielding Methodology

(1) General Fielding Plan. The UBA will be fielded vertically in order to give the units with the highest

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priority the item first. Appendix A provides the schedule in which the UBA will be delivered. Appendix B provides a Schedule of Events.

(2) Method of Fielding. An initial issue of the UBA's will be provided by the Marine Corps Systems Command (MARCORSYSCOM) in order to bring the units up to the Table of Equipment (T/E) quantities as shown in appendix A.

d. Replaced Systems/Equipment. N/A

2. System Description

a. Administrative Information

(1) Nomenclature. Breathing Apparatus, Underwater

(2) TAMCN. C4185IIE

(3) Stores Account Code (SAC). 3

(4) NSN. 4220-01-164-4997

(5) Unit of Issue (UI). Each

(6) Unit Cost (UC). \$6,300 (est)

(7) Support Cost. N/A

(8) Equipment Density. Normal

(9) Readiness Reporting. Yes

(10) Equipment Identification Number. 09603A

b. Physical Characteristics

	<u>Operational Configuration</u>	<u>Storage/Shipping Configuration</u>
(1) Length	24 in	24 in
(2) Width	18 in	18 in
(3) Height	10 in	10 in
(4) Square	3 ft(2)	3 ft(2)
(5) Cube	2.5 ft(3)	2.5 ft(3)
(6) Weight	27 lbs	27 lbs

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(7) Stowage 2.5 ft(3) 2.5 ft(3)

(8) Power
Requirements None

c. Operational Characteristics. The UBA provides a combat diver with enough oxygen to stay under the water for up to 4 hours. The exact time will depend on the individual diver's rate of breathing and his depth in the water. The UBA decreases a diver's chance of detection by its ability to prevent any exhaust bubbles from escaping to the surface.

d. Associated/Related Systems/Equipment. The UBA will interface with the Oxygen Transfer Pump System, C2276; Cylinder, compressed (K-bottle), NSN 8120-00-151-9757; Surface Swimmer Set, K4953; Closed Circuit Life Vest, K4516; Diving Dry Suit Set, C1087; Tool Set, Shop, Oxygen Equipment, K4994; and the UBA Deployable Tool Set, K4999 so it can be properly operated or maintained.

3. Logistics Support

a. Maintenance Support

(1) The UBA requires first through fourth echelons of maintenance. All of the maintenance tasks, with the exception of calibration, should be accomplished by the owning unit/using unit. Calibration will need to be performed by a calibration facility on the Pressure Regulator; the Test Assembly; Multi Purpose Valve (MPV); and the Test Kit, Bellows.

(2) Calibration. The Pressure Regulator; MPV; Test Assembly; and Test Kit, Bellows will need to be calibrated by a Navy calibration facility on a scheduled basis.

b. Contractor Support Requirements

* (1) Regulator must be rebuilt by Coastal Systems Station (Code 2530) every 6 years.

(2) Interim Contractor Support (ICS). N/A

c. Manpower, Personnel, and Training

(1) Personnel Requirements. Support for the UBA should not impact personnel. The current T/O will be used to support and maintain the UBA. A Combat Diver (MOS 8653) will maintain and operate the UBA.

(2) Training Requirements

(a) Operator Training. In order to become certified to operate the UBA, a diver (MOS 8653) must complete one of the following:

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1 Attend the Army's Special Forces Combat Diver's course in Key West, FL.

2 Attend a Mobile Training Team (MTT) course. Naval Sea Systems Command (NAVSEA) and the Naval Safety Center (NAVSAFCEN) have developed a 10-day MTT on the UBA. The MTT provides instruction in the Planned Maintenance System (PMS) and will check all the UBA's to certify they function in accordance with NAVSEA SS521-AA-MAN-010 paragraphs 1-3. To schedule or attend this course, coordination with the MARCORSYSCOM Project Officer (C2IA) will need to occur. This course will be available on a one time basis at the Marine Corps bases which have dive units.

(b) Alternate Training Courses

1 Currently, Marines which attend the SCUBA training course in Panama City, FL are only authorized to complete SCUBA operations. The Training and Education Division (C462), MCCDC is proposing a 1-week transition course at the conclusion of the Panama City course as an additional procedure to certify Marines as UBA qualified.

2 Training and Education Division (C462) is also coordinating a Period Of Instruction (POI) that will be approved by NAVSEA, Supervisor of Diving (OOC). The course will provide units with a training package to train previously trained SCUBA divers to become UBA qualified divers.

(c) Maintainer Training. A diver (MOS 8653) must attend the National Draegar's LAR V course in Pittsburgh, PA before he is authorized to perform maintenance on the UBA.

(3) Training Support Items. N/A

d. Supply Support

(1) Provisioning. All the provisioning has been completed for the UBA.

(2) Replenishment. The owning units are responsible for requisitioning replacement UBA's from the following source of supply via normal supply procedures using the supply system:

SPCC Mechanicsburg, PA //N35//
Navy Ships Parts Control Center
Navy Material
Mechanicsburg, PA 17055

e. Support Equipment

(1) Special Tools. N/A
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(2) Common Tools. All the tools needed to support the UBA are found in either the Tool Set, Shop, Oxygen Equipment, K4994; or the UBA Deployable Tool Set, K4999.

(3) Special Purpose Test Equipment (SPTE). All the SPTE needed to support the UBA is found in the Tool Set, Shop, Oxygen Equipment, K4994 and are also provided below:

Nomenclature	NSN	Mfgr. Part No.
Light, Diagnostic-Examination	6530-00-480-8286	National Draegar (ND) U11538
Precision Metering Device Rod, Break, Gauge, Alignment T-Connection Piece	4220-01-247-9688	ND R32271
Test Assembly, MPV		ND 4050379
Test Assembly, Pressure	4220-01-249-0704	
Test Assembly, Regulator Pressure		ND 4054115
Test Kit, Bellows		ND 4054156
Test Kit, Bag, Breathing	4220-01-247-9697	
Test Set, Valve, Safe Ultrasonic Cleaning System	4220-01-247-9695	Bronson 952-514

(4) General Purpose Test Equipment (GPTE). N/A

(5) Test Program Sets (TPS). N/A

(6) Other Support Equipment. N/A

f. Technical Publications (TP)

(1) In addition to the open circuit diving technical manuals, the following TP's are needed at the using units in order to properly support the UBA:

NAVSEA SS600-AJMMO-010/Army TM5-4220-232-14 & P,
Operations and Maintenance Instruction
Publication Control Number (PCN) 20701274500

Tool Set, Shop, Oxygen Equipment, SL-3-09658A

Tool Set, Deployable, UBA, SL-3-09659A

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(2) The NAVSEA SS600-AJMMO-010/Army TM5-4220-232-14 & P is an operations and maintenance manual which also includes a components parts list and repair parts list.

g. Computer Resources Support. N/A

h. Facilities

(1) Existing Facilities. The UBA must be maintained in an oxygen safe room. The Oxygen Transfer Pump System (OTPS) can be used as the maintenance facility. The OTPS is a configuration of oxygen transferring components located inside a Marine Corps Expeditionary Shelter System (MCESS). The MCESS portion of the OTPS has been designated an oxygen safe room by Coastal Systems Station, Panama City, FL to transfer oxygen and maintain oxygen transferring equipment.

(2) New Facilities. N/A

(3) Interim Facilities. N/A

i. Packaging, Handling, Storage, and Transportation

(1) Packaging. The transportation case, NSN 4220-01-170-7199, should be used to package the UBA.

(2) Handling. The oxygen cylinder (pony bottle) should be handled carefully to prevent it from being dropped and damaging the valve. The cylinder will contain compressed oxygen and a rupture to its valve is potentially dangerous.

(3) Storage. The UBA should be stored dry, clean and in a cool, dry environment to discourage corrosion or mildew.

(4) Transportability. The compressed cylinder must meet the Department of Transportation shipping requirements prior to embarkation.

j. Warranties. The UBA does not have a warranty.

4. Actions Required To Place Equipment In Service

a. Gaining Commands

(1) Actions to Place Items In Service

(a) Place all UBA's on administrative deadline until all of the other actions in this paragraph are completed.

(b) Ensure all the appropriate technical publications are on hand.

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(c) Ensure an oxygen safe room is available prior to performing any maintenance to include filling the oxygen cylinder.

(d) Ensure all the Test Measurement Diagnostic Equipment (TMDE) is on hand prior to performing any maintenance on the UBA.

(e) Ensure MOS 8653 personnel are available and that they have attended the necessary training prior to operating or maintaining the UBA.

(f) Locate a source of aviators grade oxygen in "K" bottles from the General Services Administration (GSA) schedule or another source of supply.

(g) Request approval to place the UBA's into service from the CG FMFPac, FMFLant, or 4th MarDiv as appropriate.

(2) Materiel Defects Reporting. If any of the contents of the UBA arrive damaged or missing, a [SF 368](#) Quality Deficiency Report (QDR) should be submitted to Commander, Marine Corps Logistics Bases, (COMMARCORLOGBASES) (808-1), Albany, GA. Additionally, if any of the items break or tear from other than normal use, a QDR should also be submitted.

b. COMMARCORLOGBASES, Albany, GA. Assist in the life cycle management of the UBA.

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LIST OF ALLOWANCES AND DELIVERY SCHEDULE

ACTIVE FORCES

<u>T/E#</u>	<u>NAME OF UNIT</u>	<u>NO. UNITS</u>	<u>QTY</u>	<u>TOTAL</u>
7411	MARINE CORPS SYSTEMS COMMAND	1	7	7
N1019	RECON CO, HQ BN, 1ST MARDIV	1	80	80
N1029	RECON CO, HQ BN, 2D MARDIV	1	80	80
N1039	RECON CO, HQ BN, 3D MARDIV	1	80	80
N4618	FORCE RECON CO, 1ST SRIG	1	80	80
N4718	FORCE RECON CO, 2D SRIG	1	80	80
N4818	DET, FORCE RECON CO, 3D SRIG	1	30	30

RESERVE FORCES

M4623	3D FORCE RECON CO, FMF (RES)	1	20	20
M4623	4TH FORCE RECON CO, MARRESFOR	1	20	20
M4623	DET, 4TH FORCE RECON CO, MARRESFOR, RENO, NV	1	20	20

SPECIAL ALLOWANCES

	NAVY DIVING & SALVAGE TRNG CENTER	1	20	20
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Appendix A to
ENCLOSURE (1)
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SCHEDULE OF EVENTS

Begin Fielding	2d qtr FY 93
Initiating Service Date	2d qtr FY 93
Initial Operational Capability (IOC)	2d qtr FY 93
Full Operational Capability (FOC)	4th qtr FY 93

Appendix B to
ENCLOSURE (1)